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GENERALIZED INTEGRAL OPERATORS RELATED WITH p–VALENT ANALYTIC FUNCTIONS

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Abstract. Let $\mathcal{A}(p), p \in N$, be the class of functions $f : f(z) = z^p + \sum_{k=1}^{\infty} a_{p+k} z^{p+k}$, analytic in the unit disc E. For $n \in N_0$, $n > -p$, an integral operator $I_{n+p-1} : \mathcal{A}(p) \longrightarrow \mathcal{A}(p)$ is defined as $I_{n+p-1} f = f^{(-1)}_{n+p-1} \star f$ such that $\left(f^{(-1)}_{n+p-1} \star f_{n+p-1}\right)(z) = \frac{z^p}{(1-z)^{p+1}}$ where $f_{n+p-1}(z) = \frac{z^p}{(1-z)^{n+p}}$ and $\star$ denotes convolution. Using this integral operator, some new classes $H_{n,p}(k, \alpha, \beta, \mu, \lambda)$ of $\mathcal{A}(p)$ are introduced and certain interesting properties of these classes are studied. A radius problem is also discussed.

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